and a direct participation of the pyramidal tract in the medulla and the spinal cord.

The author thinks it was left to Kahler and Pick to first explain the relation of the many different anatomical changes found as accounting for chorea, and this explanation is that the pathological product lays within the range of the pyramidal tract, or at least in such relationship that it can make its presence felt. This disease process can, therefore, have its seat in any part of the course of the pyramidal road, from brain to cord, and the nutritional changes are not necessarily in various or all portions of this path, one single spot being sufficient. The process may be of various kinds, from a single hyperæmia to the most irreparable change, and in this way is to be explained the complex etiology of the disease. For instance, such a condition may result from embolism, the result of a rheumatic endocarditis with dendritic vegetations. In this way it may result from ordinary apoplexy, or from the hyaline bodies of Jakomenko, and lately described by Wallenberg, or even indeed the as yet unknown germ of Straton and Laufenauer, not to speak of the various nutritional changes that have been described by others.

ON THE CEREBRAL CENTRE FOR MOVEMENT OF THE VAGINA IN ANIMALS.

Bechterew and M. Slawski (Russian Medicinskoje Obesrenje, No. 15, 1891. Ref. in Neurog. Centralb.,No. 1, 1892). Former investigation concerning the motor innervation of the vagina, as from Kehrer, Langley and Justrebow has left the question of a higher nerve centre in an unsettled condition, and with the idea of supplying this knowledge the authors have made some experiments on rabbits and sluts. A distended bladder was put in the vagina, and this communicated with a water manometer by means of a glass tube which came in contact with a rotating cylinder by means of Marry's writing apparatus; and in this way movements of the vagina in response to stimulation of areas of the brain were very distinctly apparent. The important points in their experiments are as follows: The cortex of the cerebrum contains centres of two kinds for the innervation of the vagina—one for the excitation of movement, the other for checking it. In rabbits they both lie in the anterior part of the motor area; in bitches they are in the sigmoid gyrus. These centres are not clearly separated topographically, and are very closely situated. In a single case did irritation of a single point in the cortex produce alternate contraction and cessation. It was further remarked that irritation in the anterior part of the optic thalamus produced checking in the movements of the vagina in rabbits as well as in the dogs. Irritation of the medulla oblongata was followed by contraction in the vagina. The tract conducting impulses to the vagina passes from the cortex through the spinal cord and later through the sacral nerves. The contraction of the vagina seemed to be inhibited by stimulation of the peripheral cut ends of the splanchnic nerves, and on the contrary stimulation of the vagi was followed by inhibition of movement. It is quite self-evident that the walls of the vagina have themselves secondary ganglia, which have an important influence over its movements. These ganglia were not, however, investigated by the authors. They note, however, the interesting fact that ligature in the superior portion of the vagina, that is, at about the internal os, irritation of the vagina was not followed by movement,and irritation of the above-mentioned areas in the cortex or the peripheral nerves was followed by no manifestations whatever.

CONCERNING MULTIPLE NEURITIS.

By Dr. J. Pal (Wiener klinischer Wochenschrift, 1891). The author remarks that our knowledge of multiple neuritis has been obtained for the most part during the past ten years and pathological cases, which were then unexplainable, now appear apparent.

The history of each of the cases are related, and concerning their etiology they are those agents which we ordinarily attribute to be the causation of the disease. For instance, two cases were due to alcohol, two more due to specific diseases, erysipelas and typhoid fever; one from exposure and one from arsenical poisoning. In the remaining one the etiology was obscure.

After the death the nerves examined, such as the optic, motor oculi, abducens, facial, auditory, radial, peroneal, and in some cases the phrenic and pneumogastrics, etc., showed quickness of degeneration, with the exception of the auditory. In the spinal cord the posterior root nerves were found diseased as were the postero-lateral columns from the dorsal region to the medulla. The posterior median columns showed very small degeneration tracts over a corresponding area. The ganglia on the posterior roots were normal apparently, and it is to be remarked that neither the